

### REMARKS

On October 10, 2008, the USPTO mailed a second or subsequent non-final Office action. A notice of appeal was filed on April 9, 2009. This response accompanies a request for continued examination (RCE).

#### Amendments

Claims 22-23 and 34-35 have been canceled, without prejudice to their being included in a continuing application.

#### Claim Rejections

In the Office action of October 10, 2008, the claims were rejected over the following references:

(1) Claims 1-4, 6-8, 10-21, 24-29, 32-33 and 36-40 were rejected under 35 U.S.C. §103(a) as obvious from U.S. Patent No. 5,455,688 (Furukawa) in view of U.S. Patent No. 5,464,087 (Bounds) and further in view of U.S. Patent No. 6,259,706 (Shimada).

(2) Claim 5 was rejected 35 U.S.C. §103(a) as obvious from Furukawa in view of Bounds and Shimada and further in view of U.S. Patent No. 6,119,053 (Taylor).

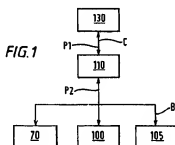
(3) Claims 22-23 and 34-35 were rejected 35 U.S.C. §103(a) as obvious from Furukawa in view of Bounds and further in view of U.S. Patent No. 6,917,594 (Feuerstraeter).

We respectfully request reconsideration.

#### Claim 1 and its dependent claims are patentable over the cited references

Claim 1, for example, recites a device for handling money that includes a money handling apparatus (*e.g.*, changer 110 in FIG. 1) with an internal controller (*e.g.*, microcontroller 400 in FIG. 2) for controlling the money handling apparatus. The device has a first port (*e.g.*, port P1) for removable connection to an external controller (*e.g.*, vending machine controller 130) for communication with the internal controller. The internal controller is arranged to

communicate over a second port (e.g., port P2) with a further device (e.g., device 70, 100 or 105) using a communications protocol. The protocol supports communication between the internal controller and any one of at least first and second different types of device for handling money. The first type of device handles money of a different type from those handled by the second type.<sup>1</sup>



An aspect of the invention relates to the provision of the additional port (e.g., port P2 in FIG. 1) on a money handling device (e.g., changer 110) to allow piggy-back connection of a device using a protocol that is not fully supported over the main port (e.g., port P1), which connects the money handling device to an external controller. The protocols used for communications over the first and second ports may be entirely different protocols or they may be different versions of the same protocol (*see, e.g.*, U.S. Patent No. 6,390,269, col. 5, lines 51-66 and col. 6, lines 6-21). Thus, the protocol used for communications over the second port may be supported only partially over the first port or may not be supported at all. As recited by the claim, the communications protocol, which is used by the internal controller to communicate over the second port (e.g., port P2) with the further device, is not fully supported over the first port (e.g., port P1).

<sup>1</sup> Although the protocol “supports” communications with multiple types of devices that handle different types of money from one another, the second port need not be capable of being connected to multiple devices at the same time (although in some cases, as in the illustrated example, it can be). The claimed “first device for handling money” and the “further device for handling money” can be devices that handle the same or different types of money.

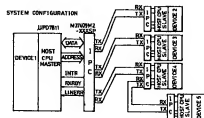
According to claim 1, the internal controller of the first device for handling money controls the money handling apparatus and relays communications between the external controller and the further device for handling money.

The Office action rejected claim 1 allegedly obvious from Furukawa in view of Bounds and Shimada. We respectfully disagree. As explained in detail below, it would not have made sense to a person of ordinary skill to incorporate the components in Bounds' transaction system into the system configuration of Furukawa. Furthermore, even if Shimada's communication controlling apparatus with its protocol conversion control were somehow incorporated into Furukawa's system (as modified in view of Bounds' transaction system), the resulting combination would not have resulted in, or rendered obvious, the subject matter of claim 1.

The Office action acknowledges that Furukawa does not disclose that its communication control system can be used with money handling devices, but relies on Bounds for its disclosure of a transaction system with various money handling components. We disagree that a person of ordinary skill would have had a reason to modify Furukawa in view of Bounds because, Furukawa discloses a system in which the components are arranged in a serial structure, whereas Bounds discloses a system in which the components are arranged in a parallel structure. This distinction is fundamental to the respective systems of Furukawa and Bounds.

For example, Furukawa discloses its system configuration in FIG. 4 (reproduced below), with devices 1, 4 and 5 serially connected to one another so that the intelligent protocol controller (IPC) associated with device 4 can facilitate communications between devices 1 and 5. Thus, in Furukawa's system, devices 1 and 5 can communicate only via device 4.

FIG. 4



In contrast, the various components in Bounds' transaction system are connected in parallel (see FIG. 1 and col. 4, lines 50-53) so that each of the components is operable to initiate communication "directly" with the other components. This is emphasized in the Summary of the Invention section of Bounds:

[T]here is provided a transaction system including two or more system components interconnected by a bus, each of the components being operable to initiate communication directly with another of the components.

(Col. 1, lines 40-44) The completely different architectures of the systems in Furukawa and Bounds indicates that a person of ordinary skill would have had no reason to try to incorporate the components of Bounds' transaction system into Furukawa's system.

Furthermore, even if a person of ordinary skill did have some reason to modify Furukawa in view of Bounds, that still would not have rendered obvious the particular claimed arrangement, even in view of Shimada's disclosure.

Claim 1 recites that the first device for handling money includes an internal controller (i) arranged to control the money handling apparatus and (ii) arranged to relay communications between the external controller and the further device for handling money. Thus, the same internal controller is arranged to perform both functions.

The claimed subject matter can facilitate the cascading of older machines (e.g., vending machines) with newer money handling devices even though the older machines are not configured for handling communications directly from the newer devices. Likewise, the claimed subject matter can facilitate adding a currency (e.g., banknote) recycler to a machine that is configured only to handle currency of a different type (e.g., coins). Addition of the "further device for handling money" can be accomplished without having to add a component or controller that is separate from the internal controller of the first device for handling money.

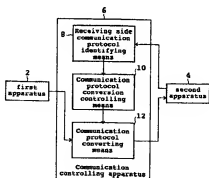
In contrast, Furukawa discloses a control device 800 with its own central processing unit (CPU) 801 and a separate intelligent protocol controller (IPC) 900 with its own control unit 910, including CPU 911 (*see* FIGs. 3A and 5). Indeed, Furukawa emphasizes the fact that the IPC 900 and its controller are separate from, and operate independently of, the control unit of the device 800 itself:

In a system made up of a plurality of devices such as a copier, an RDF, and a sorter, there is provided in each device a communication control device for providing communication between devices *such that communication between devices can be performed independently of the device control unit inherent to that device.*

(Furukawa, Abstract) Thus, Furukawa discloses that different controllers are used to control the device and to handle communications. The control unit inherent to Furukawa's device 4 is separate from the IPC that controls incoming and outgoing communications.

Likewise, Shimada discloses a protocol converting apparatus 6 that is "provided between a first apparatus 2 . . . and a second apparatus 4 . . ." that communicate with one another (*see* col. 3, lines 60-67 and FIG. 1, reproduced below).

FIG. 1



Even assuming, for the sake of argument, that there were some reason to modify Furukawa to include the protocol converting apparatus 6 of Shimada, that would require adding the apparatus 6 somewhere between Furukawa's devices 1 and 4 ( or 4 and 5). In any event, the protocol converting apparatus would be external to the device 4 and would be separate from the control unit inherent to the device 4. Thus, even if modified in view of Bounds and Shimada, Furukawa's device 4 would not correspond to the claimed "first device for handling money" because the internal control unit of the device 4 would not be arranged to "relay" the communications between the devices 1 and 5, as recited in claim 1. Instead, a protocol converting unit different and separate from the inherent control unit of the device 4 would relay the communications.

Therefore, the combination of Furukawa, Bounds and Shimada would not have rendered the subject matter of claim 1 obvious because it the combination would not include an internal controller (i) arranged to control the money handling apparatus and (ii) arranged to relay communications between the external controller and the further device for handling money.

The other references also do not disclose or render the subject matter of claim 1 obvious.

At least for the foregoing reasons, claim 1, as well as its dependent claims, should be allowable.

Claim 7 and its dependent claims are patentable over the cited references

Independent claim 7 was previously amended to clarify that the communications using the different protocols take place over the first and second parts *of the first money handling apparatus*. As explained above, even if the disclosure of Shimada were somehow combined with that of Furukawa and Bounds, at most that would suggest placing Shimada's protocol conversion apparatus 6 between Furukawa's devices 1 and 4 (or 4 and 5). The protocol conversion apparatus 6 would be an additional component that is entirely separate from the devices 1, 4 and 5, and the communications using different protocols would not take place over

different ports of the device 4. Therefore, the combination of the cited references would not have rendered obvious the claimed method, which includes “communicating with a further money handling apparatus over a second port *of the first money handling apparatus* by means of a communications protocol . . . , wherein the communications protocol is not fully supported over the first port *[of the first money handling apparatus]*,” as recited in claim 7.

At least for these reasons, claim 7 and its dependent claims should be allowable.

Claim 8 and its dependent claims are patentable over the cited references

Independent claim 8 recites a first device for handling money that facilitates communications between an external controller and a further device for handling money. The first device includes a money handling apparatus and an internal controller for controlling the money handling apparatus. Communications between the external controller and the further device for handling money are relayed by the internal controller. Therefore, claim 8, as well as its dependent claims, should be allowable at least for the same reasons as claim 1.

Claim 14 and its dependent claims are patentable over the cited references

Independent claim 14, was previously amended to clarify that the communications using the different protocols take place over the first and second ports *of the first money handling apparatus*. For reasons similar to those discussed above in connection with claim 7, the combination of the cited references would not have rendered obvious the claimed method, which includes “communicating with a further money handling apparatus over a second port *of the first money handling apparatus* according to a communications protocol not fully supported by the first port *[of the first money handling apparatus]*,” as recited in claim 14.

At least for these reasons, claim 14 and its dependent claims should be allowable.

Claim 15 and its dependent claims are patentable over the cited references

Independent claim 15 also recites a first device for handling money that facilitates communications between an external controller and a further device for handling money. The

first device includes a money handling apparatus and an internal controller for controlling the money handling apparatus. Among other things, the internal controller is arranged to convert between first units of value used for communications over said first port and second units of value used for communication over said second port. The references do not disclose anything even remotely similar to this feature. Indeed, the Office action does not even allege that the references somehow disclose or render obvious this feature. Thus, the Office action fails to establish a *prima facie* case of obviousness of claim 15 and its dependent claims.

Claim 19 is patentable over the cited references

Independent claim 19 should be allowable for reasons similar to those discussed above in connection with claims 7 and 15.

First, claim 19 previously was amended to clarify that the communications using the different protocols take place over the first and second ports *of the money handling device*. Therefore, the combination of the cited references would not have rendered obvious the claimed method, which includes “communicating with a further money handling apparatus over a second port *of the first money handling device* according to a communications protocol not fully supported by the first port *[of the first money handling device]*.”

Second, the references do not disclose anything even remotely similar to converting between first units of value used for communications over said first port and second units of value used for communication over said second port.

Claim 20 is patentable over the cited references

Independent claim 20 recites a first device for handling money that facilitates communications between an external controller and a further device for handling money. The first device includes an internal controller arranged to receive a code indicative of the type of the further device on a second port, and to output in response thereto on a first port an amended code representative to an external controller of a type different from that of the further device.



The Office action points to Bounds (at col. 3, lines 5-31) as allegedly disclosing this feature. That is incorrect. Although Bounds discloses that each component is responsive to messages containing a destination codes associated with that component. There is absolutely no disclosure in Bounds or any of the other references of outputting an amended code in response to receipt of another code, as recited in claim 20.

Claims 22-23 and 34-35

Claims 22-23 and 34-35 have been canceled. Therefore, the rejections of these claims are moot.

Claim 36 is patentable over the cited references

Independent claim 36 recites a first device for handling money that facilitates communications between an external controller and a further device for handling money. The first device includes a money handling apparatus and an internal controller for controlling the money handling apparatus. The first device itself includes first and second ports for communications, respectively, with the external controller and the further device. As discussed above in connection with claims 1 and 7, a person of ordinary skill would have had no reason to combine the cited references in the manner alleged so as to obtain the claimed subject matter.

Conclusion

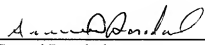
It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Allowance of the claims is respectfully requested.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 6/8/09

  
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